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Study of the peculiarities of color vision in the course of "biophysics" in a pedagogical university

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Abstract

© 2016 Imer et al.The article substantiates the necessity of studying the peculiarities of color vision of human in the course "Biophysics" that have been integrated into many types of higher education institutions. It describes the experience of teaching this discipline in a pedagogical higher education institution. The article presents a brief review of the most compelling existing color vision hypotheses, according to the authors mind: G. Allen, P. Lucas and N. Domini, which are mainly associated with the appearance of color perception with dietary habits of human ancestors, and a fundamentally different assumptions of M. Changizi, whereby the color perception was necessary for a human for a good communication with their own kind for the evaluation of skin tones. In this article is observed the system of the educational experiment research of the functioning of the color perception system of the human eye, as a natural addition to the proposed hypotheses. An experimental study model of a fragment of the retina is proposed, and a laboratory work on the study of a system of a colour human perception, the study of a photobiological paradox of vision by the example of a study model of the opaque lens (cataract). The subject results of its use in a pedagogical university are debated. All this allows us to focus on a caring attitude for human biotic sensory systems in aggressive abiotic influences. It is especially important in teachers training, aimed at training and raising a healthy younger generation. The authors also consider it necessary to acquaint future teachers with the authors of the various theories of color vision and the curricula vitae of the authors of the various discoveries, because this allows enhancing an interest in the study course.

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Keywords

Biographical information, Biophysics, Color vision, Educational experiment, Human vision, Photobiological paradox, Teaching